3. Species Sensitivity Screening

To select the most sensitive species for the term of this Order, species sensitivity screening shall be performed one time for the low and high concentrate waste dilution scenarios when effluent Dms of 145 and 473 apply (see section VI.C.6.b of the Order). For each screening event, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using a fish, an invertebrate, and an alga species, to be selected from the list of approved tests referenced in Table E-11. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge during that given month. For those tests that require collection of additional renewal samples (as specified in the listed test method protocols), a second and third sample shall be collected. If the results of all three species for both dilution scenarios is "Pass," then the species that exhibited the highest "Percent Effect" regardless of dilution scenario shall be used for routine monitoring during this Order cycle. If the results of all three species for both dilution scenarios results in a single "Fail," then that species resulting in the Fail shall be used for routine monitoring during this Order cycle. Likewise, if the results of all three species for both dilution scenarios results in two or more species with a "Fail," then the species that exhibits the highest "Percent Effect" shall be used for routine monitoring during this Order cycle.

The species used to conduct routine chronic toxicity effluent monitoring shall be the most sensitive species from the most recent species sensitivity screening. To select the most sensitive species for the term of the next Order, rescreening shall be conducted prior to permit reissuance and the results submitted with the report of waste discharge.

Toxicity results obtained during the species screening may be used to evaluate compliance with the chronic toxicity maximum daily effluent limitation (MDEL). During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

D. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manuals previously referenced. Additional requirements are specified below.

1. The Discharger shall perform toxicity tests on final effluent samples. If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) and originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS®) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.
2. Reference toxicant test results shall be submitted with the effluent sample test results. Both tests must satisfy the test acceptability criteria specified in EPA-821-R-02-012. If the test acceptability criteria are not achieved, the sample shall be retaken and retested within 14 days of the failed sampling event. The retest results shall be reported in accordance with EPA-821-R-02-012 (chapter on report preparation) and the results shall be attached to the next monitoring report.
3. The discharge is subject to determination of "Pass" or "Fail" from an acute or chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge IWC response ≤0.75 × Mean control response

A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." The relative "Percent Effect" at the discharge IWC is defined and reported as:

((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100

Acute and Chronic WET testing is to be performed with only two test concentrations, the laboratory control and a single effluent treatment (the IWC). As discussed in Fact Sheet section IV.C.6, evaluation of concentration-response does not apply to single-concentration (IWC) tests where the TST is applied.

4. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method manuals (Tables E-9 and E-11), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.

5. Dilution water and control water, including brine controls, shall be uncontaminated natural water, as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

6. Monthly reference toxicant testing is sufficient.

7. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized by the Executive Officer.

E. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail."

When an effluent limitation for acute or chronic toxicity is exceeded during regular WET monitoring, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications of this permit (Section VI.C.2.b). As specified in Section VI.C.2.b., the Discharger shall notify the Central Coast Water Board and U.S. EPA Region 9 and initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance. The Discharger shall initiate a TRE to address effluent toxicity if any WET test result exceeds the acute or chronic effluent limit during accelerated monitoring, as specified in Section VI.C.2.a.ii.

F. Toxicity Reporting

1. The Discharger shall include a full report of toxicity test results with the regular quarterly monitoring report and include the following information.

   a. Toxicity test results,

   b. Dates of sample collection and initiation of each toxicity test, and

   c. And/or toxicity discharge limitations (or value).

2. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

3. Toxicity test results shall be reported according to the appropriate guidance – *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, U.S. EPA Office of Water, EPA-821-R-01-012 (2002) or the latest edition or *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, EPA-821-R-02-012 (2002) or subsequent editions.

4. If the TRE Action Plan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the time period in which the investigation conducted under the TRE Action Plan occurred.
5. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
6. Graphical plots and tables clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests.
7. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the Central Coast Water Board and/or U.S. EPA, Region 9.
8. The report shall also include:
   a. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the acute and chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar quarter shall be reported on the SMR due date specified in Table E-16.
   b. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS

The Discharger shall comply with applicable state and local requirements regarding the production of recycled wastewater, including requirements of California Water Code (CWC) sections 13500 – 13577 (Water Reclamation) and regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria).

A. MONITORING LOCATIONS REC-001

1. When producing recycled water, the discharger shall monitor recycled water at location REC-001 as follows.

Table E-12. Recycled Water Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Daily Flow[1]	MGD	Metered	Daily
Maximum Daily Flow[1]	MGD		Monthly
Mean Daily Flow[1]	MGD	Calculated	Monthly
Total Coliform	MPN/100mL	Grab	Daily
Biochemical Oxygen Demand, 5-day	mg/L	24-hr Composite	Weekly
Total Non-Filterable Residue (Suspended Solids)	mg/L	24-hr Composite	Weekly
Total Dissolved Solids	mg/L	24-hr Composite	Weekly
pH	standard units	Grab	1/Day
Settleable Solids	ml/l/hr	Grab	Daily
Chlorine Residual[2]	mg/L	Metered	Continuous

[1] Flow shall be metered at the distribution system pump station to provide a record of the quantity of reclaimed water used each day (per normal irrigation period).

[2] Report daily maximum and daily minimum values prior to discharge and at the end of the chlorine contact chamber. Compliance shall be determined by daily minimum values measured within the chlorine contact zone at the end of the chlorine contact chamber.

2. In the event the Producer is unable to comply with the conditions of the water recycling requirements and prohibitions, the Producer shall immediately notify the Central Coast Water Board by telephone and submit a written follow-up report with two weeks of the noncompliance. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps are being taken to prevent the problems from recurring.
3. An annual self-monitoring report shall be submitted to the Central Coast Water Board by January 30 of the following year. The report shall include:

   a. A letter transmitting self-monitoring reports should accompany each report. The letter shall include a discussion of violations found during the reporting period and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Producer has previously submitted a report describing corrective actions or a time schedule for implementing corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Producer or the Producer's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

   b. Tabulations of the results of each required analysis by the Producer specified in Table E-12 by date, time, type of sample, and station.

B. MONITORING LOCATIONS INT-001, INT-002

1. The Discharger shall monitor water at the SVRP as follows:

Table E-13. SVRP Process Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Location
Influent Loading Rate[1]	gpm/ft^2	Metered	Continuous	INT-001
Turbidity[2]	NTU	Metered	Continuous	INT-002

[1] Report daily maximum values. Influent loading rate to filters shall be measured.
[2] Report daily maximum and daily mean values. Turbidity samples shall be obtained after filtration, but prior to disinfection.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Bacteria Monitoring – Monitoring Locations RSW-A, RSW-B, RSW-C, and RSW-D

Bacteria monitoring shall be conducted to assess bacteriological conditions in areas used for body contact recreation (e.g., swimming) and to assess conditions of aesthetics for general recreation use (e.g., picnicking, boating). Bacteria monitoring shall be conducted along the 30-foot contour at Monitoring Locations RSW-A, RSW-B, RSW-C, and RSW-D. Bacteria monitoring shall be conducted in accordance with the following table. Latitude and Longitude shall be provided for all stations when reporting.

Table E-14. Triggered Shoreline Bacteria Monitoring Schedule

Parameter	Units	Sampling Station	Sampling Frequency
Total and Fecal Coliform Bacteria[1], [2], [3],	MPN/100ml	RSW-A, B, C, D	Monthly
Enterococcus Bacteria[1], [3], [4]	MPN/100ml	RSW-A, B, C, D	Monthly
Visual Monitoring[5]	Narrative	RSW-A, B, C, D	Monthly

[1] For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100ml. The detection methods used for each analysis shall be reported with the results of the analysis.

[2] Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 C.F.R. part 136, unless alternate methods have been approved in advance by U.S. EPA pursuant to 40 C.F.R. part 136.

[3] If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section V.A.1 of the Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued daily until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities. When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean. Shore stations (immediately inshore of 30-foot contour sites) shall be sampled concurrent with 30-foot contour repeat sampling.

[4] Detection methods used for enterococcus shall be those presented in U.S. EPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, or any improved method determined by the Central Coast Water Board (and approved by U.S. EPA) to be appropriate.

[5] Visual monitoring shall include observations of wind (direction and speed), weather (e.g., cloudy, sunny, rainy), antecedent rainfall (7-day), sea state, and tidal conditions (e.g., high, slack, or low tide). Observations of water discoloration, floating oil and grease, turbidity, odor, material of sewage origin in the water or on the beach, and temperature (°C) shall be recorded and reported.

These requirements also satisfy the CCLEAN 30-foot contour bacteriological monitoring requirements noted in Table E-15, below.

IX. OTHER MONITORING REQUIREMENTS

A. Central Coast Long-Term Environmental Assessment Network (CCLEAN)

1. The Discharger shall participate in the implementation of the CCLEAN Regional Monitoring Program in order to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program objectives.

   a. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.

   b. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan.

   c. Determine sources of contaminants to nearshore waters.

   d. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.

   e. Develop a long-term database on trends in the quality of nearshore waters, sediments, and associated beneficial uses.

f. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.

g. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.

2. Monitoring requirements of the CCLEAN Program in effect as of the date of this order are outlined in the following table. The CCLEAN Quality Assurance Project Plan (QAPP) for each year will be submitted for staff approval prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites and a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in the QAPP and/or Annual Report.

Table E-15. CCLEAN Monitoring Requirements

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Effluent – Santa Cruz, Watsonville, Monterey One Water, Carmel Area Wastewater District) in effluent	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			Dioxins/Furans	
			PBDEs	
		Two-day, four-liter composites	Pyrethroids	Trends of: Emerging contaminants of concern
			Fipronils	
			Neonicotinoids	
	Monthly	Grab	Ammonia	Sources, loads, trends and permit compliance for: Nutrients
			Nitrate	
			Silica	
			Ortho-Phosphate	
			Urea	
Influent – Watsonville	Once per year (dry season)	Same as effluent	Same as effluent	Efficiency of: POP removal
Rivers – San Lorenzo	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
Rivers – San Lorenzo Pajaro Salinas Carmel		Two-day, four-liter composites	Pyrethroids	Trends of: Emerging contaminants of concern
			Fipronils	
			Neonicotinoids	
		Grab	Ammonia	Effects of: Nutrients
			Nitrate	
			Silicate	
			Ortho-Phosphate	
Monterey Bay – (Receiving water) Santa Cruz Watsonville MOW	Monthly or weekly, as required by each NPDES permit	Grab	Total coliform	Sources, trends, effects and permit compliance for: Fecal Indicator Bacteria (FIB) pathogen indicators
			Fecal coliform	
			Enterococcus	

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Monterey Bay – (Open water) North South	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
		Grab	TSS	Effects of: Nutrients and FIBs
			FIBs	
			Ammonia	
			Nitrate	
			Silica	
			Ortho-Phosphate	
			Urea	
	Every 5 years	Database satellite ocean color imagery	Chlorophyll *a*	
Sediments – Six sites along the 80m contour in Monterey Bay, Santa Cruz Inner Harbor, Moss Landing Harbor	Annually in the fall	Sediment Grab	DDTs	Status, effects and alert level comparisons for POPs
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
			Grain size	
			TOC	
Six sites along the 80m contour in Monterey Bay	Every five years in the fall		Benthic infauna	Status and trends of benthic communities
Mussels – Five rocky intertidal sites in Monterey Bay	Annually in the wet season	1 composite of 30-40 mussels	Lipid content	Status, trends, effects and alert level comparisons for: POPs and pathogen indicators
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
		1 composite of 30-40 mussels	Fecal indicator bacteria	

B. Biosolids Monitoring, Notification, and Reporting

1. Biosolids Monitoring

a. Biosolids shall be tested for the metals required in 40 C.F.R. section 503.16 (for land application) or section 503.26 (for surface disposal), using the methods in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), as required in 503.8(b)(4), at the following minimum frequencies:

Table E-16. Biosolids Monitoring Frequency

Volume (dry metric tons)[1]	Sampling and Analysis Frequency[2]
0-290	Once per year
290-1,500	Once per quarter
1,200-15,000	Once per 60 days
>15,000	Once per month

[1] For accumulated, previously untested biosolids, the Permittee shall develop a representative sampling plan, including number and location of sampling points, and collect representative samples.

[2] Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis. Biosolids to be land applied shall be tested for organic-N, ammonium-N, and nitrate-N at the frequencies required above.

b. Prior to land application, the Permittee shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 C.F.R. section 503.32. Prior to disposal in a surface disposal site, the Permittee shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Significantly/Further Reduce Pathogens," the Permittee shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliforms and/or pathogens, samples must be drawn at the frequency in Table E-14 above. For fecal coliform, at least seven grab samples must be drawn during each monitoring event and a geometric mean calculated from these seven samples.

c. For biosolids that are land applied or placed in a surface disposal site, the Permittee shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 C.F.R. section 503.33(b).

d. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and federal facilities with greater than five million gallons per day (MGD) influent flow shall sample biosolids for pollutants listed under Section 307(a) of the Clean Water Act (as required in the pretreatment section of the permit for POTW's with pretreatment programs). Class 1 facilities and federal facilities greater than five MGD shall test dioxins/dibenzofurans using a detection limit of less than one pg/g at the time of their next priority pollutant scan if they have not done so within the past five years, and once per five years thereafter.

e. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance 40 C.F.R. part 261.

f. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

g. Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (EPA Method 9095) at the frequency in 11 (a) above or more often if necessary to demonstrate that there are no free liquids.

2. Biosolids Notification

The Permittee, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements:

a. Notification of non-compliance: The Permittee shall notify U.S. EPA Region 9, the Central Coast Water Board, and the regional board located in the region where the biosolids are used or disposed, of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Permittee shall notify U.S. EPA Region 9 and the affected regional boards of the non-compliance in writing within five working days of becoming aware of the non-compliance. The Permittee shall require their biosolids

management contractors to notify U.S. EPA Region 9 and the affected regional boards of any non-compliance within the same timeframes. See Attachment F for Central Coast Water Board contact information.

b. If biosolids are shipped to another State or to Indian Lands, the Permittee must send 60 days prior notice of the shipment to the permitting authorities in the receiving State or Indian Land (the U.S. EPA Regional Office for that area and the State/Indian authorities).

c. For land application: Prior to reuse of any biosolids from this facility to a new or previously unreported site, the Permittee shall notify U.S. EPA and the Central Coast Water Board. The notification shall include a description and topographic map of the proposed site(s), names and addresses of the applier, and site owner and a listing of any state or local permits which must be obtained. The plan shall include a description of the crops or vegetation to be grown, proposed loading rates and determination of agronomic rates. If any biosolids within a given monitoring period do not meet 40 C.F.R. section 503.13 metals concentration limits, the Permittee (or its contractor) must pre-notify U.S. EPA, and determine the cumulative metals loading at that site to date, as required in section 503.12.

d. The Permittee shall notify the applier of all the applier's requirements under 40 C.F.R. part 503, including the requirement that the applier certify that the management practices, site restrictions, and any applicable vector attraction reduction requirements have been met. The Permittee shall require the applier to certify at the end of 38 months following application of Class B biosolids that the harvesting restrictions in effect for up to 38 months have been met.

e. For surface disposal: Prior to disposal to a new or previously unreported site, the Permittee shall notify U.S. EPA and the Regional Board. The notice shall include description and topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator, site owner, and any state or local permits. The notice shall describe procedures for ensuring public access and grazing restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

3. Biosolids Reporting

The Permittee shall submit an annual biosolids report to the U.S. EPA CDX e-reporting system and Central Coast Water Board by February 19 of each year for the period covering the previous calendar year. The report shall include:

a. The amount of biosolids generated during the reporting period, in dry metric tons, and the amount accumulated from previous years;

b. Results of all pollutant and pathogen monitoring required in IX.B.1.b of the Monitoring and Reporting Program of this Order. Results must be reported on a 100% dry weight basis for comparison with 40 C.F.R. part 503 limits;

c. Descriptions of pathogen reduction methods and vector attraction reduction methods, including supporting time and temperature data, and certifications, as required in 40 C.F.R. sections 503.17 and 503.27;

d. Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other use or disposal methods not covered above, and volumes delivered to each.

e. For land application sites, the following information must be submitted by the Permittee, unless the Permittee requires its biosolids management contractors to report this information directly to the U.S. EPA Region 9 Biosolids Coordinator:

   i. Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner;

   ii. Volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, calculated plant available nitrogen;

   iii. Crop planted, dates of planting and harvesting;

   iv. For any biosolids exceeding 40 C.F.R. section 503.13 Table 3 metals concentrations: the locations of sites where applied and cumulative metals loading at that site to date;

   v. Certifications of management practices in section 503.14; and

   vi. Certifications of site restrictions in section 503(b)(5).

f. For surface disposal sites:

   i. Locations of sites, site operator, site owner, size of parcel on which disposed;

   ii. Results of any required groundwater monitoring;

   iii. Certifications of management practices in section 503.24; and

   iv. For closed sites, date of site closure and certifications of management practices for the three years following site closure.

g. For all biosolids used or disposed at the Permittee's facilities, the site and management practice information and certification required in sections 503.17 and 503.27; and

h. For all biosolids temporarily stored, the information required in section 503.20 required to demonstrate temporary storage.

   Reports shall be submitted to:

   Executive Officer
   Central Coast Regional Water Quality Control Board
   centralcoast@waterboards.ca.gov

i. All the requirements of 40 C.F.R. part 503 and Title 23 CCR chapter 15 are enforceable by the U.S. EPA and this Regional Board whether or not the requirements are stated in an NPDES permit or any other permit issued to the discharger.

C. Pretreatment Monitoring and Reporting

At least once per year, influent, effluent, and biosolids shall be sampled and analyzed for the priority pollutants identified under Section 307(a) of the Clean Water Act. By March 1st of each year, the Discharger shall submit an annual report to the Regional Board, State Board, and USEPA describing the Discharger's pretreatment activities over the previous calendar

year. In the event that the Discharger is not in compliance with any conditions or requirements of this permit affected by the pretreatment program, including any noncompliance with pretreatment audit or compliance inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements. This report shall contain, but not be limited to, the following information:

1. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the plant's influent and effluent for those pollutants U.S. EPA has identified under section 307(a) of the Act which are known or suspected to be discharged by industrial users. The Discharger is not required to sample and analyze for asbestos until U.S. EPA promulgates an applicable analytical technique under 40 C.F.R. part 136.
2. Biosolids shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling and analysis. The biosolids analyzed shall be a composite sample of a minimum of twelve discrete samples taken at equal time intervals over the 24-hour period. Wastewater and biosolids sampling and analysis shall be performed a minimum of annually and not less than the frequency specified in the required monitoring program for the plant. The Discharger shall also provide any influent, effluent, or biosolids monitoring data for nonpriority pollutants which the Discharger believes may be causing or contributing to interference, pass-through, or adversely impacting biosolids quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 C.F.R. part 136 and amendments thereto. Biosolids samples shall be collected from the last point in solids handling before disposal. If biosolids are dried on-site, samples shall be composited from at least twelve discrete samples from twelve representative locations.
3. A discussion of upset, interference, or pass-through incidents, if any, at the POTW which the Discharger knows or suspects were caused by industrial users of the POTW system. The discussion shall include the reasons why the incidents occurred, corrective actions taken and, if known, the name and address of the industrial user(s) responsible. Discussions shall also include a review of applicable pollutant limitations to determine whether any additional limitations or changes to existing requirements may be necessary to prevent pass-through, interference, or noncompliance with sludge disposal requirements.
4. The cumulative number of industrial users that the Discharger has notified regarding Baseline Monitoring Reports, and the cumulative number of industrial user responses.
5. An updated list of the Discharger's industrial users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal Categorical Standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the Federal Categorical Standards. The Discharger shall also list the non-categorical industrial users that are subject only to local discharge limitations. The Discharger shall characterize the compliance status of each industrial user by employing the following descriptions:
    a. In compliance with Baseline Monitoring Report requirements (where applicable);
    b. Consistently achieving compliance;
    c. Inconsistently achieving compliance;

d. Significantly violated applicable pretreatment requirements as defined by 40 C.F.R. section 403.8(f)(2)(vii);

e. On a schedule to achieve compliance (include the date final compliance is required);

f. Not achieving compliance and not on a compliance schedule; or

g. The Discharger does not know the industrial user's compliance status.

6. A summary of inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding industrial users. The summary shall include:

   a. Names and addresses of the industrial users subject to surveillance by the Discharger and an explanation of whether they were inspected, sampled, or both, and the frequency of these activities at each user; and

   b. Conclusions or results from the inspection or sampling of each industrial user.

7. A summary of compliance and enforcement activities during the past year. The summary shall include names and addresses of the industrial users affected by the following actions:

   a. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the Federal Categorical Standards or local discharge limitations;

   b. Administrative Orders regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations:

   c. Civil actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

   d. Criminal actions regarding the industrial user's noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned Federal Categorical Standards or local discharge limitations;

   e. Assessment of monetary penalties. For each industrial user, identify the amount of the penalties;

   f. Restriction of flow to the POTW; or

   g. Disconnection from discharge to the POTW.

8. Description of any significant changes in operating the pretreatment program which differ from the information in the Discharger's Approved POTW Pretreatment Program, including but not limited to changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority or enforcement policy; funding mechanisms; resource requirements; or staffing levels.

9. A summary of the annual pretreatment budget, including the costs of pretreatment program functions and equipment purchases.

10. A summary of public participation activities to involve and inform the public.

11. A description of any changes in biosolids disposal methods and a discussion of any concerns not described elsewhere in the report.

12. Reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee if such employee is responsible for overall operation of the POTW. Signed copies of these reports shall be submitted to the U.S. EPA and the State at the following addresses:

    CIWQS database: http://ciwqs.waterboards.ca.gov/

    State Water Resources Control Board
    Regulation Unit
    P.O. Box 100
    Sacramento, CA 95812-0100

    US EPA, Region 9
    R9Pretreatment@epa.gov

D. Outfall Inspection

The Discharger shall conduct an annual dye study for four years and then conduct a visual (dive) inspection during the fifth year. The dye study and visual inspection results shall summarize the outfall's physical integrity and be included in the applicable Annual Report.

E. MBNMS Spill Reporting

In accordance with Standard Provision VI.E. (Attachment D), within 24 hours, the Discharger shall report all sewage spills under its control that are likely to enter ocean waters, directly to the Monterey Bay National Marine Sanctuary (MBNMS) office at 831-236-6797. A report shall also be provided to the Central Coast Water Board within five days of the time the Discharger becomes aware of the circumstances.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at <http://www.waterboards.ca.gov/water_issues/programs/ciwqs/>. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal. The Discharger shall use the current version of the Permittee Entry Template (PET) tool to configure data into the applicable CIWQS Data Format, and shall update that template according to this Order (e.g., add/delete parameters, revise limits, update monitoring locations, etc). Blank versions of the latest PET tool are available at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required monitoring using U.S.

EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-17. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Effective Permit date (see Table 3)	All	First day of the second month following the month of sampling (e.g., reports for sampling conducted in January are due no later than March 1)
Hourly	Effective Permit date (see Table 3)	Hourly	Submit with monthly SMR
Daily	Effective Permit date (see Table 3)	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	Submit with monthly SMR
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of the second month following the quarter of sampling (e.g., reports for sampling conducted in the first quarter (Jan 1 – Mar 31) are due no later than May 1)
4 times/year corresponding to each dilution scenario, if it occurs.	Effective Permit date (see Table 3)	Dependent upon concentrate waste dilution ratio	Submit with next monthly SMR
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	First day of the second month following the quarter of sampling (e.g., reports for sampling conducted in the first quarter (Jan 1 – Mar

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
			31) are due no later than May 1)
Annually	January 1 following (or on) permit effective date	January 1 through December 31	Submit with Annual Report (due no later than 1/30)
3 / Permit Term	January 1 following (or on) permit effective date	January 1 through December 31	Submit with Annual Report and permit renewal application Form 2A.

4. Section III.B of the Standard Provisions (Attachment D) includes the standard provisions for test procedures. U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R. part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. sections 122.21(e)(3) and 122.44(i)(1)(iv). Both 40 C.F.R. sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A U.S. EPA-approved analytical method is sufficiently sensitive where:

   a. The Minimum Level (reported ML, also known as the Reporting Level, or RL) is at or below both the level of the applicable water quality criterion/objective and this Order limitation for the measured pollutant or pollutant parameter; or

   b. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

   c. The method has the lowest ML of the U.S. EPA-approved analytical methods where none of the U.S. EPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation. The MLs in Ocean Plan Appendix II remain applicable. However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the Ocean Plan. For instance, U.S. EPA Method 1631E for mercury is not currently listed in Ocean Plan Appendix II, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

5. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

e. Compliance Determination. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A. For purposes of reporting and administrative enforcement by the Central Coast Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

6. Multiple Sample Data. When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND), the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

1. DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: <http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring>.

D. Other Reports

1. The Discharger shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions – VI.C of the Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

ATTACHMENT F – FACT SHEET

CONTENTS

TABLES

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Central Coast Water Board incorporates this Fact Sheet as findings of the Central Coast Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	3 270118002
Discharger	Monterey One Water
Name of Facility	Regional Wastewater Treatment Plant and Advanced Water Purification Facility
Facility Address	14811 Del Monte Boulevard
	Marina, California 93933
	Monterey County
Facility Contact, Title and Phone	Richard L. Gilliam, Interim Plant O&M Manager, (831) 883-1118 x114
Authorized Person to Sign and Submit Reports	Tamsen McNarie, Assistant General Manager, (831) 883-6125
Mailing Address	5 Harris Court, Building D, Monterey, California 93940
Billing Address	5 Harris Court, Building D, Monterey, California 93940
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	Producer
Facility Permitted Flow	29.6 MGD (Average Dry Weather Flow [ADWF])[1] 75.6 MGD (Peak Wet Weather Flow [PWWF]) [1]
Facility Design Flow	29.6 MGD (ADWF) [1] 75.6 MGD (PWWF) [1]
Watershed	Lower Salinas Valley HA (309.10)
Receiving Water	Pacific Ocean (Monterey Bay National Marine Sanctuary)
Receiving Water Type	Ocean waters

[1] Based on secondary treatment capacity and hydraulic capacity at the Regional WWTP.

A. The Discharger changed its name from Monterey Regional Water Pollution Control Agency (MRWPCA) to Monterey One Water in June 2017. Monterey One Water (M1W, hereinafter Discharger) is the owner and operator of the Regional Wastewater Treatment Plant (WWTP) and Advanced Water Purification Facility (hereinafter

Facility), a publicly owned treatment works (POTW).

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R3-2014-0013 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0048551, adopted on May 22, 2014, with an expiration date of July 31, 2019. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on November 21, 2017. The application was deemed complete on December 5, 2017.

D. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

The Facility, which currently serves a population of approximately 279,000, consists of and provides regional wastewater treatment, disposal, and reclamation facilities for the cities of Monterey, Pacific Grove, Del Rey Oaks, Sand City, Marina, and Salinas; the Seaside County Sanitation District; the Castroville, Moss Landing, and Boronda Community Services Districts; and Fort Ord. Each member entity retains ownership and operating/maintenance responsibility for wastewater collection and transport systems up to the point of connection with interceptors owned and operated by the Discharger. Residential, commercial, and industrial wastewater is conveyed to the Facility. The collection system is 100% separate. The Discharger implements a pretreatment program.

The Discharger operates an existing secondary treatment plant and is constructing an advanced water purification facility (AWPF) to be completed by the third quarter of 2019 as part of the Pure Water Monterey project. The project involves treating secondary effluent with the AWPF (see description below) and then injecting this purified recycled water into the Seaside groundwater basin, with subsequent withdrawal for use as a municipal water supply. The AWPF will also provide purified recycled water for landscape irrigation by the Marina Coast Water District. The WWTP also provides secondary treated wastewater for further tertiary treatment and recycling for agricultural irrigation in the northern Salinas valley as part of the Castroville Seawater Intrusion Project. Details on the Regional WWTP and AWPF are provided below.

1. Regional WWTP Secondary Treatment

As part of the Pure Water Monterey project, new sources of urban and agricultural land runoff in surface water bodies, will be directed to the Regional WWTP headworks to increase the supply of recycled water for agricultural irrigation after treatment by the SVRP, and for landscape irrigation and groundwater replenishment after treatment through the AWPF. The source waters are composed of agricultural wash water from the City of Salinas, stormwater flows from the City of Salinas, stormwater and agricultural

runoff from Blanco Drain, and stormwater and agricultural runoff from the Reclamation Ditch, which drains a series of natural lakes through lateral ditches and pumps. The new source waters will be mixed with existing domestic sewage (including storm water, dry season urban runoff, and industrial wastewater) from the member agencies.

The Facility currently accepts 30,000 to 50,000 gallons per day (gpd) of saline wastes by truck from business entities that would otherwise be discharging to the sanitary sewer system. Such wastewaters include softener regenerant wastes and reverse osmosis (RO) concentrate, which are now trucked to the Regional WWTP instead of being discharged to the collection system. Because irrigation uses of recycled wastewater are sensitive to elevated levels of salts, the Discharger segregates these high-salt wastewaters from the rest of the influent flow to the Regional WWTP. These hauled saline wastes are held in a 375,000-gallon (approximate) lined pond and mixed with secondary effluent at the Regional WWTP. These hauled saline wastes are ultimately discharged with secondary effluent to the Pacific Ocean through Discharge Point 001.

Wastewater treatment at the Regional WWTP includes screening, aerated grit removal, primary sedimentation, secondary treatment through trickling filters, solids contact (i.e., bio-flocculation), and secondary clarification. Undisinfected secondary clarifier effluent is discharged through Discharge Point 001. Sludge/biosolids are anaerobically digested and sent to two screw presses. The holding lagoons and some of the drying beds may still be utilized in emergency situations. Dried solids are then hauled to the Monterey Regional Waste Management District's landfill in Marina, California, adjacent to the Regional WWTP, where they are used for daily cover.

2. Advanced Water Purification Facility (AWPF)

The AWPF will receive secondary effluent from the Regional WWTP and will provide full advanced treatment including ozone, membrane filtration, RO, advanced oxidation using ultraviolet light and hydrogen peroxide, and finished water stabilization. The AWPF is designed to produce 5 MGD of recycled water for groundwater injection in the Seaside basin and urban landscape irrigation by Marina Coast Water District. The RO concentrate will be mixed with hauled saline waste and secondary effluent (when available) from the Regional WWTP and discharged at Discharge Point 001. Membrane backwash produced by the AWPF will be sent to the Regional WWTP headworks for treatment. This Order addresses the discharge of AWPF RO concentrate with hauled saline waste and secondary effluent at Discharge Point 001. The groundwater injection operations of the AWPF are governed by WDRs-WRRs Order No. R3-2017-0003.

3. Salinas Valley Reclamation Project (SVRP)

The SVRP is a tertiary treatment plant adjacent to the Regional WWTP that receives secondary effluent from the Regional WWTP and provides recycled water for irrigation of 12,000 acres of farmland in the northern Salinas Valley. The SVRP provides tertiary treatment (through coagulation, flocculation, filtration, and disinfection) of secondary effluent for design flows of up to 29.6 MGD. The SVRP holds tertiary treated wastewater in an 80-acre-foot storage pond before it is distributed to farmland by the Castroville Seawater Intrusion Project. Production of disinfected tertiary recycled water at the SVRP portion of the Regional WWTP is governed by this Order. The SVRP does not contribute any wastewater to Discharge Point 001. The use of recycled water for irrigation is regulated via separate water recycling requirements.

4. Flows

The new source waters will result in additional influent flow to the WWTP and the addition of the AWPF will increase the recycling capacity. At the peak operating capacity, the AWPF will receive approximately 6.85 MGD of secondary effluent as source water (of that 0.68 MGD will be returned to the headworks as filter backwash) and will achieve approximately 73 percent overall recovery to produce 5 MGD of recycled water for irrigation and groundwater injection. The RO concentrate waste component will result in an additional flow of up to 1.17 MGD to Discharge Point 001. If the secondary effluent is produced at the permitted flow of 29.6 MGD, 6.85 MGD of this becomes influent to the AWPF, and 0.68 MGD of the AWPF influent is returned to the WWTP headworks, a maximum of 23.4 MGD of secondary effluent remains available for delivery to the SVRP or blending with RO concentrate through Discharge Point 001. The total discharge flow through Discharge Point 001 will not exceed the permitted flows of 29.6 MGD (ADWF) and 75.6 MGD (PWWF). Table F-2 lists the predicted flows from the WWTP and the AWPF.

Table F-2. Flows Contributing to Discharge Point 001

Wastewater Sources		Effluent Flow (MGD)	Ocean Outfall Maximum Permitted Flow (MGD)
WWTP	Trucked in saline wastes	0.03 - 0.05	81.2
	Secondary Effluent	18.53 (annual average) 29.6 (ADWF) 75.6 (PWWF)	
AWPF	RO Concentrate	0.83-1.17 (Maximum)	

5. Dilution Factors

The addition of the RO concentrate to the WWTP secondary effluent will change the character of the effluent waste stream discharged to Monterey Bay. Effluent quality will be a function of the amount of secondary effluent commingled with the AWPF RO concentrate and hauled saline waste. Additional minimum probable initial dilution factors (Dms), expressed as parts seawater per part wastewater, in the NPDES permit represent the changed effluent quality and the impacts of the discharge to the Monterey Bay National Marine Sanctuary. Secondary effluent from the Regional WWTP will be (1) treated through the AWPF to produce purified water for groundwater recharge or urban landscape irrigation, (2) treated at the Salinas Valley Reclamation Project (SVRP)—as currently done—to produce tertiary recycled water for agricultural irrigation, or (3) blended with AWPF RO concentrate and hauled saline waste discharged to the ocean. The amount of secondary effluent diverted to the outfall will vary throughout the year, with many months having essentially no secondary effluent discharged because all water is recycled. Because of the variability in composition and flow, four dilution factors have been developed to implement water quality standards in this permit.

The Discharger used the EPA-approved Visual Plumes UM3 Model to conduct modeling of the discharge through the ocean outfall. In conducting modeling, the Discharger used conservative assumptions and inputs for temperature and density profile (highly stratified) and zero velocity for ambient current. In addition, the Discharger ran the model under three separate oceanic conditions: upwelling, oceanic, and Davidson. Of the three

oceanic conditions, the upwelling conditions produced the lowest (most conservative) results. Using the upwelling model results, the Discharger developed dilution estimates for 36 scenarios of RO concentrate, hauled saline wastes, and secondary effluent volumes. Of the 36 Dm scenarios, the Discharger proposed four Dms, shown in Table F-3 below, for use in implementing effluent limitations.

Table F-3. Dilution Factors for Implementing Effluent Limitations

Total Flow (MGD)	Secondary Effluent (MGD)	Dm
1.57	0.4	473.4
2.77	1.6	388.3
9.17	8.0	258.7
29.6	29.5	145[1]

1. The modeling results indicated a Dm of 169.3 would correspond to the total effluent flow of 29.6 MGD; however, the Discharger proposed the more conservative Dm of 145, which is the allowable dilution in Order R3-2014-0013.

More secondary treated water that is recycled results in less secondary treated water being discharged through the ocean outfall. Because the secondary treated wastewater volume is large relative to the volume of AWPF RO concentrate and hauled saline waste, the volume of secondary effluent discharge essentially controls Dms. Lower flows through the outfall experience greater mixing and therefore have larger Dm values. The Central Coast Water Board used the four Dms in Table F-3 to determine the need for water quality-based effluent limitations and to calculate those limitations.

B. Discharge Points and Receiving Waters

Discharges of secondary effluent, hauled saline waste, and AWPF RO concentrate at Discharge Point 001 occurs through an 11,260-foot outfall/diffuser system that terminates at a depth of approximately 100 feet in the Pacific Ocean (Monterey Bay) at 36.72778° latitude and 121.83750° longitude. The receiving water is part of the Monterey Bay National Marine Sanctuary, designated as such on September 15, 1992. The purpose of the National Marine Sanctuaries Program is to protect areas of the marine environment which possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance. The first priority of the program is the long-term protection of resources within designated sanctuaries. The Monterey Bay Sanctuary has been recognized for its unique and diverse biological and physical characteristics. The Facility's outfall/diffuser system is located outside the Monterey Bay National Marine Sanctuary Zone of Prohibition.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data, Secondary Treatment Standards and Ocean Plan Table 1 Limitations – Discharge Point 001

Parameter	Units	Effluent Limitation			Monitoring Data (From June 1, 2014 – December 31, 2017)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
$CBOD_5$	mg/L	25	40	85	24	41	42
	lb/day[1]	6,200	10,000	21,000	3,252	5,673	5,741
	% Removal[2]	85	--	--	93	--	--
TSS	mg/L	30	45	90	22	37	41
	lb/day[1]	7,400	11,000	22,000	2,976	5,141	5,741
	% Removal[2]	85	--	--	94	--	--
Oil and Grease	mg/L	25	40	75	6.0	9.0	9.0
	lb/day[1]	6,200	10,000	19,000	994	1,824	1,824
Settleable Solids	ml/L	1.0	1.5	3.0[3]	0.10	0.2	0.5
Turbidity	NTU	75	100	230[3]	21	37	39
pH	pH units	6.0 – 9.0 at all times[4], [5]			6.3-8.2[4]		

[1] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 29.6 MGD for the treatment facility and are therefore only good up to this flow. For flows above 29.6 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

lbs/day = 0.00834 x Ce x Q
where:
Ce = the effluent concentration limit in µg/L
Q = observed flow rate in MGD

[2] Limitations and historic results are the minimum percent removal.

[3] Instantaneous Maximum.

[4] Instantaneous Minimum-Maximum.

[5] Excursions from the effluent limit range are permitted subject to the following limitations (40 C.F.R. section 401.17):

a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
b. No individual excursion from the range of pH values shall exceed 60 minutes.
Note: 40 C.F.R. section 401.17(2)(c) notes that, for the purposes of 40 C.F.R. section 401.17, "excursion" is defined as "an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines." The State Board may adjust the requirements set forth in paragraph 40 C.F.R. section 401.17 (a) with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration, or other technical factors.

Table F-5. Historic Effluent Limitations and Monitoring Data for Protection of Marine Aquatic Life

Parameter	Units	Effluent Limitation			Monitoring Data (From June 1, 2014 – December 31, 2017)		
		6-Month Median	Maximum Daily	Instant Max	Highest 6-Month Median	Highest Maximum Daily	Highest Instant Max
Cadmium, Total Recoverable	µg/L	150	580	1,500	ND	0.086[1]	0.086[1]
	lb/day[2]	36	140	360	ND	ND	ND
Chromium (VI)[3]	µg/L	290	1,200	2,900	11	11	11
	lb/day[2]	72	290	720	0.44	0.44	0.44
Lead, Total Recoverable	µg/L	290	1,200	2,900	0.11[1]	0.35[1]	0.35[1]
	lb/day[2]	72	290	720	ND	ND	ND
Selenium, Total Recoverable	µg/L	2,200	8,800	22,000	25	44	44
	lb/day[2]	540	2,200	5,400	1.0	0.57	0.57
Silver, Total Recoverable	µg/L	79	390	1,000	0.14[1]	0.14[1]	0.14[1]
	lb/day[2]	20	95	250	ND	ND	ND
Cyanide[4], Total (as CN)	µg/L	150	580	1,500	60.5	81	81
	lb/day[2]	36	140	360	8.7	14	14
Total Residual Chlorine[5]	µg/L	290	1,200	8,800	ND	ND	ND
	lb/day[2]	72	290	2,200	ND	ND	ND
Acute Toxicity	TUa	--	4.7	--	--	0.4	--
Chronic Toxicity	TUc	--	150	--	--	625	--
Phenolic compounds (non-chlorinated)	µg/L	4,400	18,000	44,000	11	11	11
	lb/day[2]	1,100	4,300	11,000	1.1	1.1	1.1
Endosulfan	µg/L	1.3	2.6	3.9	ND	ND	ND
	lb/day[2]	0.32	0.65	0.97	ND	ND	ND
Endrin	µg/L	0.29	0.58	0.88	ND	ND	ND
	lb/day[2]	0.072	0.14	0.22	ND	ND	ND
HCH	µg/L	0.58	1.2	1.8	ND	0.0058	0.0058
	lb/day[2]	0.14	0.29	0.43	ND	0.00032	0.00032

[1] Estimated concentration. The parameter was detected at a concentration greater than the method detection level (MDL), but lower than the minimum level (ML).

[2] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 29.6 MGD for the treatment facility and are therefore only good up to this flow. For flows above 29.6 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

lbs/day = 0.00834 x Ce x Q
where:
Ce = the effluent concentration limit in µg/L
Q = observed flow rate in MGD

[3] The Discharger may at its option meet this objective as a total chromium objective.

[4] If a discharger can demonstrate to the satisfaction of the Central Coast Water Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical

method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 C.F.R. part 136, as revised May 14, 1999.

[5] Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours shall be determined using the following equation:

logy=-0.43(logx)+1.8 where: y = the water quality objective (in µg/L) to apply when chlorine is being discharged; and

x = the duration of uninterrupted chlorine discharge in minutes.

The applicable effluent limitation must then be determined using Equation No. 1 from the Ocean Plan.

[6] The Discharger is not required to disinfect secondary effluent due to treatment system performance and outfall configuration and placement. The total chlorine residual effluent limitations are retained in this Order in the event the Discharger implements chlorine-based disinfection in the future and to verify compliance with semiannual Table 1 Pollutant monitoring requirements which include total chlorine residual.

[7] See Attachment A for applicable definitions.

Table F-6. Historic Effluent Limitations and Monitoring Data for the Protection of Human Health

Parameter	Units	30-Day Average Effluent Limitation	Monitoring Data (From June 1, 2014 – December 31, 2017) Highest 30-Day Average
Non-Carcinogens			
Acrolein	µg/L	32,000	ND
	lb/day[1]	7,900	ND
Antimony	µg/L	180,000	0.98
	lb/day[1]	43,000	0.0048
Bis(2-Chloroethyoxy) Methane	µg/L	640	ND
	lb/day[1]	160	ND
Bis(2-Chloroisopropyl) Ether	µg/L	180,000	ND
	lb/day[1]	43,000	ND
Chlorobenzene	µg/L	83,000	ND
	lb/day[1]	21,000	ND
Di-n-Butyl Phthalate	µg/L	510,000	ND
	lb/day[1]	130,000	ND
Dichlorobenzenes	µg/L	740,000	0.074[2]
	lb/day[1]	180,000	ND
Diethyl Phthalate	µg/L	4,800,000	ND
	lb/day[1]	1,200,000	ND
Dimethyl Phthalate	µg/L	120,000,000	ND
	lb/day[1]	30,000,000	ND
2-Methyl-4,6-Dinitrophenol	µg/L	32,000	30[2]
	lb/day[1]	7,900	ND
2,4-Dinitrophenol	µg/L	580	ND
	lb/day[1]	140	ND
Ethylbenzene	µg/L	600,000	ND
	lb/day[1]	150,000	ND
Fluoranthene	µg/L	2,200	0.0032[2]
	lb/day[1]	540	ND
Hexachlorocyclopentadiene	µg/L	8,500	ND

Parameter	Units	30-Day Average Effluent Limitation	Monitoring Data (From June 1, 2014 – December 31, 2017) Highest 30-Day Average
	lb/day[1]	2,100	ND
Nitrobenzene	µg/L	720	ND
	lb/day[1]	180	ND
Thallium	µg/L	290	ND
	lb/day[1]	72	ND
Toluene	µg/L	12,000,000	0.47[2]
	lb/day[1]	3,100,000	ND
Tributyltin	µg/L	0.20	ND
	lb/day[1]	0.05	ND
1,1,1-Trichloroethane	µg/L	79,000,000	ND
	lb/day[1]	19,000,000	ND
Carcinogens			
Acrylonitrile	µg/L	15	ND
	lb/day[1]	3.6	ND
Aldrin	µg/L	0.0032	ND
	lb/day[1]	0.00079	ND
Benzene	µg/L	860	ND
	lb/day[1]	210	ND
Benzidine	µg/L	0.010	ND
	lb/day[1]	0.0025	ND
Beryllium	µg/L	4.8	ND
	lb/day[1]	1.2	ND
Bis(2-Chloroethyl)Ether	µg/L	6.6	ND
	lb/day[1]	1.6	ND
Bis(2-Ethylhexyl)Phthalate	µg/L	510	1.1[2]
	lb/day[1]	130	ND
Carbon Tetrachloride	µg/L	130	ND
	lb/day[1]	32	ND
Chlordane	µg/L	0.0034	ND
	lb/day[1]	0.00083	ND
Chlorodibromomethane	µg/L	1,300	0.28[2]
	lb/day[1]	310	ND
Chloroform	µg/L	19,000	0.78
	lb/day[1]	4,700	0.0072
1,4-Dichlorobenzene	µg/L	2,600	ND
	lb/day[1]	650	ND
3,3'Dichlorobenzidine	µg/L	1.2	ND
	lb/day[1]	0.29	ND
1,2-Dichloroethane	µg/L	4,100	ND
	lb/day[1]	1,000	ND
1,1-Dichloroethylene	µg/L	130	ND

Parameter	Units	30-Day Average Effluent Limitation	Monitoring Data (From June 1, 2014 – December 31, 2017) Highest 30-Day Average
	lb/day[1]	32	ND
Dieldrin	µg/L	0.0058	ND
	lb/day[1]	0.0014	ND
2,4-Dinitrotoluene	µg/L	380	ND
	lb/day[1]	94	ND
1,2-Diphenylhydrazine	µg/L	23	ND
	lb/day[1]	5.8	ND
Halomethanes	µg/L	19,000	0.38[2]
	lb/day[1]	4,700	ND
Heptachlor	µg/L	0.0073	ND
	lb/day[1]	0.0018	ND
Heptachlor Epoxide	µg/L	0.0029	ND
	lb/day[1]	0.00072	ND
Hexachlorobenzene	µg/L	0.031	ND
	lb/day[1]	0.0076	ND
Hexachlorobutadiene	µg/L	2,000	ND
	lb/day[1]	500	ND
Hexachloroethane	µg/L	370	ND
	lb/day[1]	90	ND
Isophorone	µg/L	110,000	ND
	lb/day[1]	26,000	ND
N-Nitrosodimethylamine	µg/L	1,100	ND
	lb/day[1]	260	ND
N-Nitrosodi-n-Propylamine	µg/L	55	ND
	lb/day[1]	14	ND
N-Nitrosodiphenylamine	µg/L	370	ND
	lb/day[1]	90	ND
PAHs (total)	µg/L	1.3	0.20
	lb/day[1]	0.32	0.00094
PCBs	µg/L	0.0028	ND
	lb/day[1]	0.00068	ND
TCDD Equivalents	µg/L	5.7×10^{-7}	2.91×10^{-8} [2]
	lb/day[1]	1.4×10^{-7}	ND
1,1,2,2-Tetrachloroethane	µg/L	340	ND
	lb/day[1]	83	ND
Tetrachloroethylene	µg/L	290	ND
	lb/day[1]	72	ND
Toxaphene	µg/L	0.031	ND
	lb/day[1]	0.0076	ND
Trichloroethylene	µg/L	3,900	ND
	lb/day[1]	970	ND

Parameter	Units	30-Day Average Effluent Limitation	Monitoring Data (From June 1, 2014 – December 31, 2017) Highest 30-Day Average
1,1,2-Trichloroethane	µg/L	1,400	ND
	lb/day[1]	340	ND
2,4,6-Trichlorophenol	µg/L	42	ND
	lb/day[1]	10	ND
Vinyl Chloride	µg/L	5,300	0.19[2]
	lb/day[1]	1,300	ND

[1] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 29.6 MGD for the treatment facility and are therefore only good up to this flow. For flows above 29.6 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:
lbs/day = 0.00834 x Ce x Q
where:
Ce = the effluent concentration limit in µg/L
Q = observed flow rate in MGD

[2] Estimated concentration. The parameter was detected at a concentration greater than the MDL, but lower than the ML.

D. Compliance Summary

A summary of the violations that occurred during the term of Order No. R3-2014-0013 are included in the table below.

Table F-7. Compliance Summary

Date	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
February 23, 2016	Single Sample Maximum	Chronic Toxicity	625	150	TUc
December 4, 2016	Weekly Average	$CBOD_5$	41	40	mg/L
August 16, 2016	Single Sample Maximum	Chronic Toxicity	625	150	TUc
August 30, 2016	Single Sample Maximum	Chronic Toxicity	625	150	TUc

For the chronic toxicity violation on February 23, 2016, the Discharger conducted a source investigation and determined that the exceedance was caused by an upset sludge digester that overflowed and was washed down into the storm pond. Following the toxicity exceedance in August 2016, the Permittee conducted a TRE. The TRE concluded that the non-routine practice of pumping restaurant grease to the headworks in lieu of directly to the digesters, due to limited digester capacity, was responsible for the violations.

E. Planned Changes

The Discharger expects to complete construction of the AWPF by the third quarter of 2019. In addition, the Discharger has been requested by California America Water (Cal Am) to conduct planning, infrastructure design, and water quality analysis required prior to the Discharger's accepting brine from Cal Am's proposed desalination plant that is a component of the Monterey Peninsula Water Supply Project. Cal Am has proposed to construct the desalination

plant near the Facility and to use subsurface slant wells near the coast for feed water. The desalination plant could provide an additional water supply that would enable Cal Am to meet State Water Board requirements to decrease pumping from the Carmel River. Cal Am has proposed to convey desalination brine from the Cal Am desalination plant to a new brine mixing structure for blending with the existing wastewater in the outfall from the Facility and then discharged through a redesigned and relocated Effluent Point 001.

Cal Am is currently seeking regulatory approvals and has estimated the desalination plant will begin operation in 2021. Because of uncertainty in the scope of the desalination plant, the probability that the Ocean Outfall diffuser ports would need to be modified, and the amount of time necessary to obtain regulatory approvals, the Discharger is not requesting the permit include Cal Am brine wastes at this time. A new ROWD would be submitted prior to consideration of the permit and compliance for discharging any amount of desalination brine.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

The addition of the AWPF is part of the Pure Water Monterey Groundwater Replenishment Project is subject to CEQA. As the lead agency, Monterey One Water issued a Notice of Preparation of an EIR on May 31, 2013, and a supplemental Notice of Preparation on December 9, 2014. Monterey One Water certified the Final EIR and approved the project on October 8, 2015. On October 30, 2017, Monterey One Water prepared and approved an addendum to the EIR, reflecting a change in design capacity of the AWPF from 4.0 MGD to 5.0 MGD.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Central Coast Water Board adopted the *Water Quality Control Plan for the Central Coastal Basin* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of very high levels of total dissolved solids (TDS) in the Pacific Ocean, including Monterey Bay, the receiving waters for discharges from the Facility meet an exception to Resolution No. 88-63, which precludes waters with TDS levels greater than 3,000 mg/L from the MUN designation. Requirements in this Order implement the Basin Plan.

   Beneficial uses applicable to coastal waters between the Salinas River and Point Pinos are as follows:

Table F-8. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	Water Contact and Non-Contact Recreation Industrial Service Supply Navigation Marine Habitat Shellfish Harvesting Commercial and Sport Fishing Wildlife Habitat

2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters. "Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses." The California Ocean Plan defines elevated temperature wastes as "Liquid, solid, or gaseous material discharged at a temperature higher than the natural temperature of receiving water." Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California*, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, and 2015. The State Water Board adopted the latest amendment on May 6, 2015, and it became effective on April 7, 2016. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-9. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Antidegradation Policy.** Federal regulation 40 C.F.R. § 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Coast Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the

antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. § 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

7. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by U.S. EPA to implement 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. part 503 that are under U.S. EPA's enforcement authority.

D. Impaired Water Bodies on the CWA section 303(d) List

CWA section 303 (d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d) listed water bodies and pollutants, the Central Coast Water Board must develop and implement Total Maximum Daily Loads (TMDLs) that will specify waste load allocations for point sources and load allocations for non-point sources.

The main body of Monterey Bay is not identified on the 303 (d) List as impaired. According to the State's 2012 303 (d) list of impaired water bodies, which was approved by U.S. EPA on July 30, 2015, the closest receiving water impairments are described below.

- The Salinas River Lagoon is listed as impaired due to nutrients and toxicity. The nutrient impairment is addressed through the Lower Salinas River Watershed Nutrient TMDL, adopted by the Central Coast Water Board in 2013. Impairment due to toxicity is addressed through the *Salinas River Watershed Sediment Toxicity and Pyrethroid Pesticides in Sediment TMDL*, adopted by the Central Coast Water Board in 2017. The discharge covered by this Order is not located in receiving waters addressed by this TMDL and is therefore not subject to the TMDL requirements.
- Moss Landing Harbor is listed as impaired due to chlorpyrifos, diazinon, low dissolved oxygen, nickel, pathogens, pesticides, pH, sediment toxicity, and sedimentation/siltation. TMDLs to address the impairments are scheduled for 2021.
- Monterey Harbor is identified as impaired by metals and sediment toxicity. The estimated date of completion for TMDLs is 2021.

On December 9, 2016, the Central Coast Water Board submitted the 2014 303(d) list with recommended changes from the 2012 303(d) list. In addition to the impairments discussed above, the 2014 303(d) list includes an additional listing for bacteria.

- The Pacific Ocean at Monterey State Beach is listed as impaired for Enterococcus and total coliform bacteria. Currently, no bacteria TMDL is scheduled.

The 2014 303(d) list, including the added bacteria impairment does not replace the 2012 303(d) list until both the State Water Board and U.S. EPA approve the changes.

E. Other Plans, Polices and Regulations

1. **Discharges of Storm Water**. For the control of storm water discharged from the site of the wastewater treatment and disposal facilities, the Order requires, if applicable, the Discharger to seek authorization to discharge under and meet the requirements of the State Water Resources Control Board's Water Quality Order 2014-0057-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.*

2. **Sanitary Sewer System Requirements.** Water Quality Order 2006-0003-DWQ, adopted on May 2, 2006 and amended by State Water Board Order WQ 2013-0058-EXEC, is applicable to all "federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California." The purpose of Water Quality Order 2006-0003-DWQ is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. § 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. § 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

This permit implements discharge prohibitions that are applicable under sections III.I.1.a, III.I.3.a, and III.I.4.a of the California Ocean Plan.

1. **Discharge Prohibition II.A** (No discharge to Monterey Bay at a location other than as described by the Order). The Order authorizes a single, specific point of discharge to Monterey Bay; and this prohibition reflects CWA section 402 prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also retained from the previous permit.

2. **Discharge Prohibition II.B** (The rate of secondary effluent dry weather average monthly rate of discharge from the WWTP shall not exceed 29.6MGD) This prohibition reflects the design capacity of the secondary treatment system and is intended to limit influent wastewater flows to that of the treatment facility design flows.

3. **Discharge Prohibition II.C** (The influent flow to the secondary treatment system shall not exceed 29.6 MGD average dry weather flow and 75.6 MGD peak wet weather flow). This prohibition reflects the design capacity of the secondary treatment system and is intended to limit influent wastewater flows to that of the treatment facility design flows.

4. **Discharge Prohibition II.D** (The rate of discharge to Monterey Bay shall not exceed 81.2 MGD). This prohibition reflects the design capacity of the ocean outfall and allows the discharge of blended secondary effluent, RO concentrate, and hauled saline waste above the design flow capacity of the secondary treatment facility.

5. **Discharge Prohibition II.E** (Overflows and bypasses prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 C.F.R. § 122.41(m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by this Order.

6. **Discharge Prohibition II.F** (Discharges in a manner, except as described by the Order are prohibited). Because limitations and conditions of the Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of the Order do not adequately address waste streams not contemplated during drafting of the Order. To prevent the discharge of such waste streams that may be inadequately regulated, the Order prohibits the discharge of any waste that was not described by the Central Coast Water Board during the process of permit issuance.

7. **Discharge Prohibition II.G** (Discharges of radiological, chemical, or biological warfare agent or high level radioactive waste to the Ocean is prohibited). This prohibition restates a discharge prohibition established in section III. H of the Ocean Plan.

8. **Discharge Prohibition II.H** (Federal law prohibits the discharge of sludge by pipeline to the Ocean. The discharge of municipal or industrial waste sludge directly to the Ocean or into a waste stream that discharges to the Ocean is prohibited. The discharge of sludge digester supernatant, without further treatment, directly to the Ocean or to a waste stream that discharges to the Ocean, is prohibited.) This prohibition reflects the prohibition in Chapter III.I.3.a of the Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. § 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards.

This Order includes limitations based on the minimum level of effluent quality attainable by secondary treatment, as established at 40 C.F.R. part 133. The secondary treatment regulation includes the following limitations applicable to all POTWs.

Table F-10. Secondary Treatment Requirements

Parameter	Effluent Limitation		
	30-Day Average	7-Day Average	Percent Removal[1]
$CBOD_5$[2]	25 mg/L	40 mg/L	85
TSS	30 mg/L	45 mg/L	85
pH	6.0-9.0		--

[1] The 30-day average percent removal shall not be less than 85 percent.
[2] The regulations at 40 C.F.R. section 133.104(b) allow the permitting authority to set effluent limitations for TOC instead of BOD_5 if a long-term correlation has been demonstrated.

Table 2 of the Ocean Plan establishes technology-based requirements, applicable to POTWs and industrial discharges for which Effluent Limitations Guidelines have not been established. The Table 2 Ocean Plan effluent limitations are summarized below.

Table F-11. Ocean Plan Table 2 Requirements

Parameter	Units	Effluent Limitation		
		30-Day Average	7-Day Average	Instantaneous Maximum
Oil and Grease	mg/L	25	40	85
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225

Table 2 of the Ocean Plan establishes effluent limitations for pH, which require pH to be within 6.0 and 9.0 pH units at all times. Further, Table 2 establishes a 75 percent minimum removal requirement for suspended solids, unless the effluent limitation is less than 60 mg/L. This Order implements the more stringent 85 percent suspended solids removal limitation based on the Secondary Treatment Standards at 40 C.F.R. part 133.

2. Applicable Technology-Based Effluent Limitations

Title 40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow of the POTW of 29.6 MGD. In addition, pursuant to the exceptions to mass limitations provided in 40 C.F.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature.

Secondary Effluent Standards reflect the minimum level of treatment to be achieved through municipal wastewater treatment. The point of compliance determination must therefore be located prior to commingling with other wastestreams. This Order includes a new monitoring location, EFF-001A, for compliance determination with $CBOD_5$, TSS, and pH.

The Ocean Plan, p. 13 specifies that Table 2 limitations apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge). Therefore, compliance with Table 2 limitations is determined at Monitoring Location EFF-001. RO concentrate and hauled saline wastes may have an impact on total effluent pH, therefore, the pH limitation and compliance monitoring is retained at EFF-001 (in addition to EFF-001A) to meet the Ocean Plan objective that states the discharge may not cause a pH change in the Ocean of more than 0.2 units.

The following tables summarize technology-based effluent limitations established by the Order.